

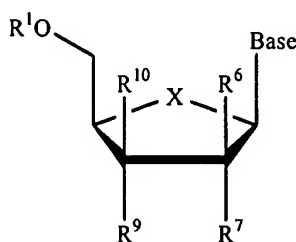
## Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

## Listing of Claims:

### CLAIMS

Claims 89 (currently amended): A method for the treatment of a hepatitis C virus infection in a host, comprising administering an anti-virally effective amount of a compound of the formula: ~~Formula XVII~~:



(XVII)

or a pharmaceutically acceptable salt thereof, wherein:

Base is a pyrrolopyrimidine;

R<sup>1</sup> and R<sup>2</sup> are independently H; phosphate; a stabilized phosphate prodrug; acyl; alkyl; sulfonate ester; benzyl, wherein the phenyl group is optionally substituted with one or more substituents; a lipid; an amino acid; a carbohydrate; a peptide; a cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein R<sup>1</sup> and R<sup>2</sup> are independently H or phosphate; R<sup>6</sup> is hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), chloro, bromo, fluoro, iodo, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>;

~~R<sup>7</sup> and R<sup>9</sup> are independently hydrogen,~~ is OR<sup>2</sup>, hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), chlorine, bromine, iodine, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)<sub>2</sub>, -N(acyl)<sub>2</sub>;

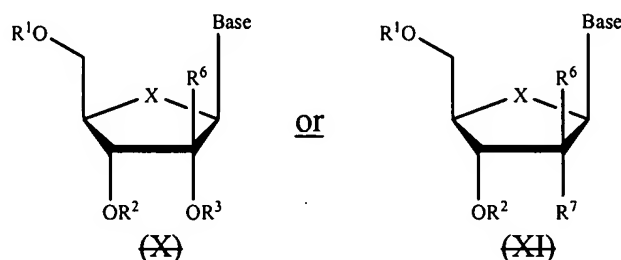
$R^9$  is hydrogen,  $OR^2$ , hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O(alkyl)$ ,  $-C(O)O(lower\ alkyl)$ ,  $-O(acyl)$ ,  $-O(lower\ acyl)$ ,  $-O(alkyl)$ ,  $-O(lower\ alkyl)$ ,  $-O(alkenyl)$ , chlorine, bromine, iodine,  $NO_2$ ,  $NH_2$ ,  $-NH(lower\ alkyl)$ ,  $-NH(acyl)$ ,  $-N(lower\ alkyl)_2$ ,  $-N(acyl)_2$ ;

$R^{10}$  is H, alkyl, chlorine, bromine or iodine;

~~alternatively,  $R^7$  and  $R^9$ , or  $R^7$  and  $R^{10}$  can come together to form a bond; and~~

X is O, S,  $SO_2$  or  $CH_2$ .

Claim 130 (currently amended): The method of claim 89 for the treatment of a hepatitis C virus infection in a host, comprising administering an anti-virally effective amount of a compound of ~~Formula X or XI~~ the formula:



or a pharmaceutically acceptable salt or ester thereof, wherein:

Base is a pyrrolopyrimidine;

$R^1$ ,  $R^2$  and  $R^3$  are independently H; phosphate or a stabilized phosphate prodrug; acyl; alkyl; sulfonate ester; or benzyl, wherein the phenyl group is optionally substituted; a lipid; an amino acid; a carbohydrate; a peptide; cholesterol; or other pharmaceutically acceptable leaving group which when administered *in vivo* is capable of providing a compound wherein  $R^1$ ,  $R^2$  and  $R^3$  are independently H or phosphate;

$R^6$  is ~~hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O(alkyl)$ ,  $-C(O)O(lower\ alkyl)$ ,  $-O(acyl)$ ,  $-O(lower\ acyl)$ ,  $-O(alkyl)$ ,  $-O(lower\ alkyl)$ ,  $-O(alkenyl)$ , chloro, bromo, fluoro, fluoro or iodo,  $NO_2$ ,  $NH_2$ ,  $-NH(lower\ alkyl)$ ,  $-NH(acyl)$ ,  $-N(lower\ alkyl)_2$ , or  $-N(acyl)_2$ ;~~

$R^7$  is ~~hydrogen,  $OR^3$ , hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl,  $-C(O)O(alkyl)$ ,  $-C(O)O(lower\ alkyl)$ ,  $-O(acyl)$ ,  $-O(lower\ acyl)$ ,  $-O(alkyl)$ ,~~

-O(lower alkyl), -O(alkenyl), chlorine, bromine, iodine, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl),  
-NH(acyl), -N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>; and  
X is O, S, SO<sub>2</sub> or CH<sub>2</sub>.

Claim 131 (currently amended): The method of claim 89 for the treatment of a hepatitis C virus infection in a host, wherein, ~~in the compound of Formula XVII:~~

R<sup>10</sup> is H, alkyl, chlorine, bromine or iodine;

~~R<sup>7</sup> and R<sup>9</sup> are independently hydrogen, is~~ OR<sup>2</sup>, alkyl, ~~alkenyl, alkynyl, Br-vinyl,~~  
~~O-alkenyl,~~ chlorine, bromine, iodine, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl), -NH(acyl),  
-N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>;

R<sup>9</sup> is hydrogen, OR<sup>2</sup>, alkyl, chlorine, bromine, iodine, NO<sub>2</sub>, NH<sub>2</sub>, -NH(lower alkyl),  
-NH(acyl), -N(lower alkyl)<sub>2</sub>, or -N(acyl)<sub>2</sub>;

R<sup>2</sup> is H;

R<sup>6</sup> is alkyl, chlorine, bromine or iodine;

~~alternatively, R<sup>7</sup> and R<sup>9</sup>, or R<sup>8</sup> and R<sup>9</sup> can come together to form a bond; and~~

X is O, S, SO<sub>2</sub> or CH<sub>2</sub>.

Claim 132 (previously presented): The method of claim 89 wherein R<sup>1</sup> is hydrogen or phosphate.

Claim 133 (previously presented): The method of claim 89 wherein R<sup>2</sup> is hydrogen, acyl or alkyl.

Claim 134 (previously presented): The method of claim 89 wherein R<sup>6</sup> is alkyl.

Claim 135 (currently amended): The method of claim 89 wherein R<sup>7</sup> is OR<sup>2</sup> or hydroxy; and R<sup>9</sup>  
~~are independently is~~ hydrogen, OR<sup>2</sup>, or hydroxy.

Claim 136 (previously presented): The method of claim 89 wherein R<sup>7</sup> is hydroxy.

Claim 137 (previously presented): The method of claim 89 wherein R<sup>9</sup> is hydroxy.

Claim 138 (previously presented): The method of claim 89 wherein R<sup>7</sup> and R<sup>9</sup> are hydroxy.

Claim 139 (previously presented): The method of claim 89 wherein R<sup>10</sup> is hydrogen.

Claim 140 (previously presented): The method of claim 89 wherein X is O.

Claim 141 (currently amended): The method of claim 89 wherein

R<sup>1</sup> is hydrogen or phosphate;

R<sup>2</sup> is hydrogen, acyl or alkyl;

R<sup>6</sup> is alkyl;

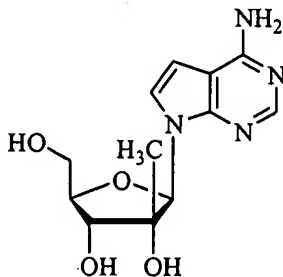
R<sup>7</sup> and R<sup>9</sup> are independently hydrogen, is OR<sup>2</sup>, or hydroxy;

R<sup>9</sup> is hydrogen, OR<sup>2</sup>, or hydroxy;

R<sup>10</sup> is hydrogen; and

X is O.

Claim 142 (previously presented): The method of claim 89 for the treatment of a hepatitis C virus infection in a host, comprising administering an antivirally effective amount of a compound of the structure:



or a pharmaceutically acceptable salt or ester thereof.

Claim 143 (currently amended): The method of claim 89, 141 or 142 wherein the method comprises administering the compound or a pharmaceutically acceptable salt or ester thereof in combination or alternation with a second anti-hepatitis C virus agent.

Claim 144 (currently amended): The method of ~~any one of claims~~ claim 143, wherein the second anti-hepatitis C virus agent is selected from the group consisting of consisting of interferon, ribavirin, a protease inhibitor, a thiazolidine derivative, a polymerase inhibitor, and a helicase inhibitor.

Claim 145 (previously presented): The method of claim 144, wherein the second anti-hepatitis C virus agent is interferon.

Claim 146 (previously presented): The method of claim 144, wherein the second anti-hepatitis C virus agent is a protease inhibitor.

Claim 147 (previously presented): The method of claim 144, wherein the second anti-hepatitis C virus agent is ribavirin.

Claim 148 (currently amended): The method of claim 89, 141 or 142 wherein the compound is in the form of a dosage unit.

Claim 149 (previously presented): The method of claim 148, wherein the dosage unit contains 50 to 1000 mg of said compound.

Claim 150 (previously presented): The method of claim 148, wherein said dosage unit is a tablet or capsule.

Claim 151 (previously presented): The method of claim 89, wherein the host is a human.

Claim 152 (currently amended): The method of claim 89, 141 or 142 wherein the compound is in substantially pure form.

Claim 153 (currently amended): The method claim 89, 141 or 142 wherein the compound is at least 90% by weight of the  $\beta$ -D-isomer.

Claim 154 (currently amended): The method of claim 89, 141 or 142 wherein the compound is at least 95% by weight of the  $\beta$ -D-isomer.

Claim 155 (new): The method of claim 130, wherein the host is a human.

Claim 156 (new): The method of claim 131, wherein the host is a human.

Claim 157 (new): The method of any one of claims 132-140, wherein the host is a human.

Claim 158 (new): The method of claim 141, wherein the host is a human.

Claim 159 (new): The method of claim 142, wherein the host is a human.

Claim 160 (new): The method of claim 143, wherein the host is a human.

Claim 161 (new): The method of claim 144, wherein the host is a human.

Claim 162 (new): The method of claim 145, wherein the host is a human.

Claim 163 (new): The method of claim 146, wherein the host is a human.

Claim 164 (new): The method of claim 147, wherein the host is a human.

Claim 165 (new): The method of claim 148, wherein the host is a human.

Claim 166 (new): The method of claims 149 wherein the host is a human.

Claim 167 (new): The method of claim 150, wherein the host is a human.

Claim 168 (new): The method of claim 152, wherein the host is a human.

Claim 169 (new): The method of claim 153, wherein the host is a human.

Claim 170 (new): The method of claim 154, wherein the host is a human.

Claim 171 (new): The method of claim 130, wherein X is O.

Claim 172 (new): The method of claim 132, wherein X is O.

Claim 173 (new): The method of claim 134, wherein X is O.

Claim 174 (new): The method of any one of claims 133, 135-139 wherein X is O.

Claim 175 (new): The method of claim 89, wherein X is O, and the method comprises administering the compound or a pharmaceutically acceptable salt or ester thereof in combination or alternation with a second anti-hepatitis C virus agent.

Claim 176 (new): The method of claim 175, wherein the second anti-hepatitis C virus agent is selected from the group consisting of consisting of interferon, ribavirin, a protease inhibitor, a thiazolidine derivative, a polymerase inhibitor, and a helicase inhibitor.

Claim 177 (new): The method of claim 176, wherein the host is a human.